Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Thrice Amended) A blancher for heating a plurality of food products at the same time comprising:

[a)] a perforate food product-receiving chamber that has a food product inlet, a food product outlet, a liquid heat transfer medium, and a plurality of food products received therein;

[b)] a food product transport mechanism received in the food product-receiving chamber [for urging] that rotates thereby urging food products in the food product-receiving chamber in a lengthwise direction from adjacent the food product inlet toward the food product outlet; [and]

[c) an orifice] a manifold comprised of a plurality of pairs of spaced apart orifices disposed in fluid flow communication with the heat transfer medium from which [a fluid] liquid heat transfer medium under pressure is discharged into the food product-receiving chamber at a flow rate of at least twenty gallons per minute per foot of length of the manifold;

wherein the manifold is oriented in a lengthwise direction and disposed outwardly of the food product-receiving chamber with its orifices directing flow of liquid heat transfer medium toward the food product-receiving chamber and located outwardly of a lengthwise-extending centerline of the blancher in an exiting quadrant thereof defined from where the rotating food product-receiving chamber emerges from the heat transfer medium to adjacent the centerline but not passing to or beyond the centerline.

2. (Twice amended) The blancher of claim [I] 1 wherein:

[1)] the food product transport mechanism comprises an auger having a plurality of pairs of axially spaced auger flights that each has a direct-contact mechanical agitation device for agitating food products by direct contact;

[2) there is a plurality of pairs of the orifices disposed in fluid flow communication with the heat transfer medium each for discharging a fluid under pressure toward the food products;

3) the heat transfer medium is comprised of a liquid; and]

[4)] the [fluid is a liquid] liquid heat transfer medium is discharged from each of the orifices at a volumetric flow rate of at least 20 gpm for increasing heat transfer to the food products.

3. (Original) The blancher of claim 2 wherein the direct-contact mechanical agitation device comprises a baffle extending from the auger.

4. (Original) The blancher of claim 2 further comprising a tank that receives the heat transfer medium wherein the tank has an inlet through which the heat transfer medium is introduced.

5. (Original) The blancher of claim 4 wherein the tank further comprises an outlet through which the heat transfer medium is drained to empty the tank of the heat transfer medium.

6. (Original) The blancher of claim 2 wherein the blancher has at least as many orifices as there are auger flights and wherein there is an orifice disposed adjacent each one of the auger flights.

7. (Original) The blancher of claim 2 wherein there is an orifice between each adjacent pair of auger flights of the plurality of pairs of auger flights.

8. (Original) The blancher of claim 2 wherein there are two orifices between each adjacent pair of auger flights of the plurality of pairs of auger flights.

9. (Thrice Amended) A blancher for heating a plurality of food products at the same time comprising [The blancher of claim 1 wherein]:

a food product-receiving chamber that has a food product inlet, a food product outlet, a heat transfer medium, and a plurality of food products received therein;

a food product transport mechanism received in the food product-receiving chamber for urging food products in the food product-receiving chamber from adjacent the food product inlet toward the food product outlet; and

an orifice disposed in fluid flow communication with the heat transfer medium from which a fluid under pressure is discharged into the food product-receiving chamber;

[1)] wherein the food product transport mechanism comprises an auger having a plurality of pairs of axially spaced auger flights that each has a direct-contact mechanical agitation device for agitating food products by direct contact;

[2)] wherein there is a plurality of pairs of the orifices disposed in fluid flow communication with the heat transfer medium each for discharging a fluid under pressure toward the food products;

[3)] wherein the heat transfer medium comprises a liquid; and

[4)] wherein the fluid is a gas discharged from each of the orifices at a volumetric flow rate of at least 60 CFM for increasing heat transfer to the food products.

10. (Original) The blancher of claim 9 wherein the direct-contact mechanical agitation device comprises a baffle extending from the auger.

11. (Canceled)

12. (Amended) The blancher of claim [11] 9 wherein the tank further comprises an outlet through which the heat transfer medium is drained to empty the tank of the heat transfer medium.

13. (Original) The blancher of claim 9 wherein the blancher has at least as many orifices as there are auger flights and wherein there is an orifice disposed adjacent each one of the auger flights.

14. (Original) The blancher of claim 9 wherein there is an orifice between each adjacent pair of the plurality of pairs of auger flights.

15. (Original) The blancher of claim 9 wherein there are two orifices between each adjacent pair of auger flights of the plurality of pairs of auger flights.

16. (Thrice Amended) A blancher for heating a plurality of food products at the same time comprising [The blancher of claim 1 wherein]:

a food product-receiving chamber that has a food product inlet, a food product outlet, a heat transfer medium, and a plurality of food products received therein;

a food product transport mechanism received in the food product-receiving chamber for urging food products in the food product-receiving chamber from adjacent the food product inlet toward the food product outlet; and

an orifice disposed in fluid flow communication with the heat transfer medium from which a fluid under pressure is discharged into the food product-receiving chamber;

[1)] wherein there is a first plurality of the orifices in fluid flow communication with the heat transfer medium, each of the orifices of the first plurality of orifices discharging a liquid under pressure into the heat transfer medium;

[2)] wherein there is a second plurality of the orifices in fluid flow communication with the heat transfer medium, each of the orifices of the second plurality of orifices discharging a gas under pressure into the heat transfer medium; and

[3)] wherein the heat transfer medium comprises a liquid.

17. (Original) The blancher of claim 16 wherein the liquid discharged from each of the orifices of the first plurality of orifices is water.

18. (Original) The blancher of claim 16 wherein the gas discharged from each of the orifices of the second plurality of orifices is air.

19. (Thrice Amended) A blancher for heating a plurality of food products at the same time comprising [The blancher of claim 1 wherein]:

a food product-receiving chamber that has a food product inlet, a food product outlet, a heat transfer medium, and a plurality of food products received therein;

a food product transport mechanism received in the food product-receiving chamber for urging food products in the food product-receiving chamber from adjacent the food product inlet toward the food product outlet; and

an orifice disposed in fluid flow communication with the heat transfer medium from which a fluid under pressure is discharged into the food product-receiving chamber;

[1)] wherein there is a first plurality of the orifices in fluid flow communication with the heat transfer medium, each of the orifices of the first plurality of orifices discharging a liquid under pressure into the heat transfer medium;

[2)] wherein there is a second plurality of the orifices in fluid flow communication with the heat transfer medium, each of the orifices of the second plurality of orifices discharging a gas under pressure into the heat transfer medium;

[3)] wherein the heat transfer medium comprises a liquid;

[4)] wherein the liquid discharged from each of the orifices of the first plurality of orifices is discharged at a volumetric flow rate of at least 20 gpm; and

[5)] wherein the gas discharged from each of the orifices of the [first] second plurality of orifices is discharged at a volumetric flow rate of at least 60 CFM.

20. (Original) The blancher of claim 19 further comprising a first manifold connected to the first plurality of orifices and a second manifold connected to the second plurality of orifices.

21-22. (Canceled)

23. (Thrice Amended) A blancher for heating a plurality of food products at the same time comprising [The blancher of claim 1 wherein]:

a food product-receiving chamber that has a food product inlet, a food product outlet, a heat transfer medium, and a plurality of food products received therein;

a food product transport mechanism received in the food product-receiving chamber for urging food products in the food product-receiving chamber from adjacent the food product inlet toward the food product outlet; and

an orifice disposed in fluid flow communication with the heat transfer medium from which a fluid under pressure is discharged into the food product-receiving chamber;

[1)] wherein the food product transport mechanism comprises an auger having a plurality of pairs of axially spaced auger flights that each has a direct-contact mechanical agitation device for agitating food products by direct contact;

[2)] wherein there is a plurality of pairs of the orifices disposed in fluid flow communication with the heat transfer medium each for discharging a fluid under pressure toward the food products;

[3)] wherein the heat transfer medium is comprised of a liquid; and

[4)] wherein the liquid is discharged from each of the orifices at a pressure of at least 30 psi for increasing heat transfer to the food products.

24. (Thrice Amended) A blancher for heating a plurality of food products at the same time comprising [The blancher of claim 21 wherein]:

a food product-receiving chamber that has a food product inlet, a food product outlet, a heat transfer medium, and a plurality of food products received therein;

a food product transport mechanism received in the food product-receiving chamber for urging food products in the food product-receiving chamber from adjacent the food product inlet toward the food product outlet; and

an orifice disposed in fluid flow communication with the heat transfer medium from which a fluid under pressure is discharged into the food product-receiving chamber;

wherein the heat transfer medium comprises a liquid, the food product transport mechanism comprises an auger that rotates during operation, the auger having a plurality of pairs of spaced apart auger flights with one side of each of the auger flights entering the liquid heat transfer medium along one side of the blancher and another side of each of the auger flights exiting the liquid heat transfer medium along the other side of the blancher, and there are a plurality of pairs of orifices arranged in a bank that is disposed in the liquid heat transfer medium along the other side of the blancher;

[1)] wherein the food product transport mechanism comprises an auger having a plurality of pairs of axially spaced auger flights that each has a direct-contact mechanical agitation device for agitating food products by direct contact;

[2)] wherein there is a plurality of pairs of the orifices disposed in fluid flow communication with the heat transfer medium each for discharging a fluid under pressure toward the food products;

[3)] wherein the heat transfer medium is comprised of a liquid; and

[4)] wherein the fluid discharged from each of the orifices is a liquid at a pressure of at least 80 psi.

25. (Thrice Amended) A blancher for heating a plurality of food products at the same time comprising [The blancher of claim 1 wherein]:

a food product-receiving chamber that has a food product inlet, a food product outlet, a heat transfer medium, and a plurality of food products received therein;

a food product transport mechanism received in the food product-receiving chamber for urging food products in the food product-receiving chamber from adjacent the food product inlet toward the food product outlet; and

an orifice disposed in fluid flow communication with the heat transfer medium from which a fluid under pressure is discharged into the food product-receiving chamber;

[1)] wherein the food product transport mechanism comprises an auger having a plurality of pairs of axially spaced auger flights that each has a direct-contact mechanical agitation device for agitating food products by direct contact;

[2)] wherein there is a plurality of pairs of the orifices disposed in fluid flow communication with the heat transfer medium each for discharging a fluid under pressure toward the food products;

[3)] wherein the heat transfer medium comprises a liquid; and

[4)] wherein the fluid discharged from each of the orifices is a gas at a pressure of at least 2 psi and at a flow rate of at least 100 CFM.

26. (Thrice Amended) A blancher for heating a plurality of food products at the same time comprising [The blancher of claim 1 wherein]:

a food product-receiving chamber that has a food product inlet, a food product outlet, a heat transfer medium, and a plurality of food products received therein;

a food product transport mechanism received in the food product-receiving chamber for urging food products in the food product-receiving chamber from adjacent the food product inlet toward the food product outlet; and

an orifice disposed in fluid flow communication with the heat transfer medium from which a fluid under pressure is discharged into the food product-receiving chamber;

[1)] wherein there is a first plurality of the orifices in fluid flow communication with the heat transfer medium, each of the orifices of the first plurality of orifices discharging a liquid under pressure into the heat transfer medium;

[2)] wherein there is a second plurality of the orifices in fluid flow communication with the heat transfer medium, each of the orifices of the second plurality of orifices discharging a gas under pressure into the heat transfer medium;

[3)] wherein the heat transfer medium comprises a liquid;

[4)] wherein the liquid discharged from each of the orifices of the first plurality of orifices is discharged at a pressure of at least 30 psi; and

[5)] wherein the gas discharged from each of the orifices of the [first] second plurality of orifices is discharged at a pressure of at least 2 psi.

27. (Thrice Amended) A blancher for heating a plurality of food products at the same time comprising [The blancher of claim 1 further comprising]:

a food product-receiving chamber that has a food product inlet, a food product outlet, a heat transfer medium, and a plurality of food products received therein;

a food product transport mechanism received in the food product-receiving chamber for urging food products in the food product-receiving chamber from adjacent the food product inlet toward the food product outlet;

an orifice disposed in fluid flow communication with the heat transfer medium from which a fluid under pressure is discharged into the food product-receiving chamber;

[1)] a tank; and

[2)] a perforate drum disposed in the tank and which comprises the food product-receiving chamber;

[3)] wherein the orifice includes a first bank of the orifices each in fluid flow communication with the tank and pointed toward the perforate drum wherein the first bank of the orifices extends in an axial direction relative to the tank and has at least two of the orifices[;],

[4)] a second bank of the orifices each in fluid flow communication with the tank and pointed toward the perforate drum wherein the second bank of the orifices extends in an axial direction relative to the tank and has at least two of the orifices[;], and

[5)] a third bank of the orifices each in fluid flow communication with the tank and pointed toward the perforate drum wherein the third bank of the orifices extends in an axial direction relative to the tank and has at least two of the orifices.

28. (Original) The blancher of claim 27 wherein each of the banks of the orifices is disposed between the tank and the perforate drum.

29. (Original) The blancher of claim 27 wherein the fluid discharged from each of the orifices passes through the perforate drum.

30. (Original) The blancher of claim 29 wherein the fluid discharged from each of the orifices impinges against at least one of the food products in the perforate drum.

31. (Thrice Amended) A blancher for heating a plurality of food products at the same time comprising [The blancher of claim 1 further comprising]:

a food product-receiving chamber that has a food product inlet, a food product outlet, a heat transfer medium, and a plurality of food products received therein;

a food product transport mechanism received in the food product-receiving chamber for urging food products in the food product-receiving chamber from adjacent the food product inlet toward the food product outlet;

an orifice disposed in fluid flow communication with the heat transfer medium from which a fluid under pressure is discharged into the food product-receiving chamber;

[1)] a tank; and

[2)] a perforate drum disposed in the tank into which are disposed the food products, wherein the food product transport mechanism is disposed in the perforate drum and rotates in a clockwise direction during operation;

[3)] wherein the orifice includes a first bank of the orifices with each of the orifices in fluid flow communication with the tank, wherein i) the first bank of the orifices generally extends in an axial direction relative to the tank and has at least two of the orifices, ii) the first bank of the orifices is disposed between a 6 o'clock position and an 8 o'clock position; and iii) a gas is discharged through each of the orifices of the first bank of the orifices[;], and

[4)] a second bank of the orifices with each of the orifices in fluid flow communication with the tank, wherein i) the second bank of the orifices generally extends in an axial direction relative to the tank and has at least two of the orifices, ii) the second bank of the orifices is disposed between a 7 o'clock position and a 9 o'clock position; and iii) a liquid heat transfer medium is discharged through each of the orifices of the [first] second bank of the orifices; and

[5)] wherein the plurality of food products has a density of greater than 55 lbs/ft.^{3}.

32. (Thrice Amended) A blancher for heating a plurality of food products at the same time comprising [The blancher of claim 1 further comprising]:

a food product-receiving chamber that has a food product inlet, a food product outlet, a heat transfer medium, and a plurality of food products received therein;

a food product transport mechanism received in the food product-receiving chamber for urging food products in the food product-receiving chamber from adjacent the food product inlet toward the food product outlet;

an orifice disposed in fluid flow communication with the heat transfer medium from which a fluid under pressure is discharged into the food product-receiving chamber;

[1)] a tank; and

[2)] a perforate drum disposed in the tank into which are disposed the food products, wherein the food product transport mechanism is disposed in the perforate drum and rotates in a clockwise direction during operation;

[3)] wherein the orifice includes a first bank of the orifices with each of the orifices in fluid flow communication with the tank, wherein i) the first bank of the orifices generally extends in an axial direction relative to the tank and has at least two of the orifices, ii) the first bank of the orifices is disposed within about 65.degree. of a centerline that extends perpendicular to horizontal and extends through the center of the perforate drum; and iii) a gas is discharged through each of the orifices of the first bank of the orifices[;], and

[4)] a second bank of the orifices with each of the orifices in fluid flow communication with the tank, wherein i) the second bank of the orifices generally extends in an axial direction relative to the tank and has at least two of the orifices, ii) the second bank of the orifices is disposed within a band that extends between 45.degree. and 85.degree. of the centerline; and iii) a liquid heat transfer medium is discharged through each of the orifices of the [first] second bank of the orifices; and

wherein the plurality of food products has a density of greater than 55 pounds per cubic foot.

33. (Amended) The blancher of claim 32 wherein each of the food products is comprised of meat, the liquid heat transfer medium is water at a temperature of at least 120° Fahrenheit, and the food product transfer mechanism is rotated such that each food product resides in the blancher for at least 3 minutes such that at least one of the food products is pasteurized.

34. (Original) The blancher of claim 33 wherein the food product transport mechanism comprises a helical auger having a plurality of pairs of axially spaced apart auger flights that have at least one baffle disposed between each adjacent pair of the auger flights.

35. (Canceled)

36. (Original) The blancher of claim 1 further comprising an atmosphere in the blancher, a first conduit in fluid flow communication with the blancher, a second conduit in fluid flow communication with the orifice, and a pump in fluid flow communication with the first conduit and the second conduit that withdraws the atmosphere and discharges the atmosphere out the orifice.

37. (Twice Amended) A blancher for heating a plurality of food products at the same time comprising:

a perforate food product-receiving chamber that has a food product inlet, a food product outlet, a heat transfer medium, and a plurality of food products received therein;

a food product transport mechanism received in the food product-receiving chamber that rotates and urges food product in the food product-receiving chamber along the food product-receiving chamber from adjacent the food product inlet toward the food product outlet;

an orifice disposed in fluid flow communication with the heat transfer medium from which a fluid under pressure is discharged into the food product-receiving chamber;

a tank that holds the liquid heat transfer medium and which receives the food product-receiving chamber;

a removable cover overlying the tank;

a manifold comprised of a plurality of pairs of spaced apart orifices from which heat transfer medium under pressure is discharged into the food product-receiving chamber at a flow rate of at least 20 gallons per minute per foot of length of the manifold

wherein the manifold is 1) oriented in a lengthwise direction relative to the food product-receiving chamber with its orifices directing flow of liquid heat transfer medium toward the food product-receiving chamber and 2) located outwardly of a lengthwise-extending centerline of the blancher in an exiting quadrant thereof defined from where the rotating food product transport mechanism emerges from the liquid heat transfer medium to adjacent the centerline but not passing to or beyond the centerline.

38. (Twice Amended) A blancher for heating a plurality of food products at the same time comprising:

a perforate food product-receiving chamber that has a food product inlet, a food product outlet, a heat transfer medium, and a plurality of food products received therein;

a food product transport mechanism received in the food product-receiving chamber that rotates and urges food product in the food product-receiving chamber along the food product-receiving chamber from adjacent the food product inlet toward the food product outlet;

an orifice disposed in fluid flow communication with the heat transfer medium from which a fluid under pressure is discharged into the food product-receiving chamber;

a tank that holds the liquid heat transfer medium and which receives the food product-receiving chamber;

a removable cover overlying the tank;

a manifold comprised of a plurality of pairs of spaced apart orifices from which a gas is discharged into the food product-receiving chamber at a pressure of 2 pounds per square inch;

wherein the manifold is 1) oriented in a lengthwise direction relative to the food product-receiving chamber with its orifices directing flow of gas toward the food product-receiving chamber and 2) located outwardly of a lengthwise-extending centerline of the blancher in an exiting quadrant thereof defined from where the rotating food product transport mechanism emerges from the liquid heat transfer medium to adjacent the centerline but not passing to or beyond the centerline.

39. (Twice Amended) A blancher for heating a plurality of food products at the same time comprising:

a perforate food product-receiving chamber that has a food product inlet, a food product outlet, a heat transfer medium, and a plurality of food products received therein;

a food product transport mechanism received in the food product-receiving chamber that rotates and urges food product in the food product-receiving chamber along the food product-receiving chamber from adjacent the food product inlet toward the food product outlet;

an orifice disposed in fluid flow communication with the heat transfer medium from which a fluid under pressure is discharged into the food product-receiving chamber;

a tank that holds the liquid heat transfer medium and which receives the food product-receiving chamber;

a removable cover overlying the tank;

a manifold comprised of a plurality of pairs of spaced apart orifices from which vapor is discharged into the food product-receiving chamber at a rate of 20 pounds per hour and a pressure of 15 pounds per square inch;

wherein the manifold is 1) oriented in a lengthwise direction relative to the food product-receiving chamber with its orifices directing flow of vapor toward the food product-receiving chamber and 2) located outwardly of a lengthwise-extending centerline of the blancher in an exiting quadrant thereof defined from where the rotating food product transport mechanism emerges from the liquid heat transfer medium to adjacent the centerline but not passing to or beyond the centerline.

40. (Thrice Amended) A blancher for heating a plurality of food products at the same time comprising:

a tank;

a food product-receiving chamber that has a food product inlet, a food product outlet, a heat transfer medium, and a plurality of food products received therein, the food product-receiving chamber comprising a perforate drum disposed in the tank into which are disposed food products;

a food product transport mechanism received in the food product-receiving chamber for urging food products in the food product-receiving chamber from adjacent the food product inlet toward the food product outlet, the food product transport mechanism comprising an auger having a plurality of pairs of axially spaced auger flights, wherein the food product transport mechanism is disposed in the perforate drum and rotates in a clockwise direction during operation thereby urging food product from adjacent a food product inlet toward a food product outlet; and

an orifice disposed in fluid flow communication with the heat transfer medium from which a fluid under pressure is discharged into the food product-receiving chamber, wherein the orifice includes

a first bank of orifices with each of the orifices in fluid flow communication with the tank, wherein i) the first bank of the orifices generally extends in an axial direction relative to the tank and has at least two of the orifices, ii) the first bank of the orifices is disposed between a 6 o'clock position and an 8 o'clock position; and iii) a gas is discharged through each of the orifices of the first bank of the orifices, and

a second bank of orifices with each of the orifices is in fluid flow communication with the tank, wherein i) the second bank of the orifices generally extends in an axial direction relative to the tank and has at least two of the orifices, ii) the second bank of the orifices is disposed between a 7 o'clock position and a 9 o'clock position; and iii) a liquid heat transfer medium is discharged through each of the orifices of the second bank of the orifices.

41. (Thrice Amended) A blancher for heating a plurality of food products at the same time comprising:

a tank;

a food product-receiving chamber that has a food product inlet, a food product outlet, a heat transfer medium, and a plurality of food products received therein, the food product-receiving chamber comprising a perforate drum disposed in the tank into which are disposed the food products;

a food product transport mechanism received in the food product-receiving chamber for urging food products in the food product-receiving chamber from adjacent the food product inlet toward the food product outlet, the food product transport mechanism comprising an auger having a plurality of pairs of axially spaced auger flights, wherein the food product transport mechanism is disposed in the perforate drum and rotates in a clockwise direction during operation thereby urging food product from adjacent a food product inlet toward a food product outlet; and

an orifice disposed in fluid flow communication with the heat transfer medium from which a fluid under pressure is discharged into the food product-receiving chamber, wherein the orifice includes

a first bank of orifices with each of the orifices in fluid flow communication with the tank, wherein i) the first bank of the orifices generally extends in an axial direction relative to the tank and has at least two of the orifices, ii) the first bank of the orifices is disposed within about 65° of a centerline that extends perpendicular to horizontal and extends through the center of the perforate drum; and iii) a gas is discharged through each of the orifices of the first bank of the orifices, and

a second bank of orifices with each of the orifices in fluid flow communication with the tank, wherein i) the second bank of the orifices generally extends in an axial direction relative to the tank and has at least two of the orifices, ii) the second bank of the orifices is disposed within a band that extends between 45° and 85° of the centerline; and iii) a liquid heat transfer medium is discharged through each of the orifices of the second bank of the orifices.

42. (Thrice Amended) A blancher for heating a plurality of food products at the same time comprising:

a tank;

a food product-receiving chamber that has a food product inlet, a food product outlet, a heat transfer medium, and a plurality of food products received therein, the food product-receiving chamber comprising a perforate drum disposed in the tank into which are disposed food products and a heat transfer medium;

a food product transport mechanism received in the food product-receiving chamber for urging food products in the food product-receiving chamber from adjacent the food product inlet toward the food product outlet, the food product transport mechanism comprising an auger having a plurality of pairs of axially spaced auger flights, wherein the food product transport mechanism is disposed in the perforate drum and rotates in a clockwise direction during operation thereby urging food product from adjacent a food product inlet toward a food product outlet; and

an orifice disposed in fluid flow communication with the heat transfer medium from which a fluid under pressure is discharged into the food product-receiving chamber, wherein the orifice includes

a first bank of orifices with each of the orifices in fluid flow communication with the tank, wherein i) the first bank of the orifices generally extends in an axial direction relative to the tank and has at least two of the orifices, and ii) the first bank of the orifices is disposed between a 6 o'clock position and an 8 o'clock position, and

a second bank of orifices with each of the orifices in fluid flow communication with the tank, wherein i) the second bank of the orifices generally extends in an axial direction relative to the tank and has at least two of the orifices, and ii) the second bank of the orifices is disposed between a 7 o'clock position and a 9 o'clock position.

43. (Thrice Amended) A blancher for heating a plurality of food products at the same time comprising:

a tank;

a food product-receiving chamber that has a food product inlet, a food product outlet, a heat transfer medium, and a plurality of food products received therein, the food product-receiving chamber comprising a perforate drum disposed in the tank into which are disposed the food products and a heat transfer medium;

a food product transport mechanism received in the food product-receiving chamber for urging food products in the food product-receiving chamber from adjacent the food product inlet toward the food product outlet, the food product transport mechanism comprising an auger having a plurality of pairs of axially spaced auger flights, wherein the food product transport mechanism is disposed in the perforate drum and rotates in a clockwise direction during operation thereby urging food product from adjacent a food product inlet toward a food product outlet; and

an orifice disposed in fluid flow communication with the heat transfer medium from which a fluid under pressure is discharged into the food product-receiving chamber, wherein the orifice includes

a first bank of orifices with each of the orifices in fluid flow communication with the tank, wherein i) the first bank of the orifices generally extends in an axial direction relative to the tank and has at least two of the orifices, and ii) the first bank of the orifices is disposed within about 65° of a centerline that extends perpendicular to horizontal and extends through the center of the perforate drum, and

a second bank of orifices with each of the orifices in fluid flow communication with the tank, wherein i) the second bank of the orifices generally extends in an axial direction relative to the tank and has at least two of the orifices, and in the second bank of the orifices is disposed within a band that extends between 45° and 85° of the centerline.

44. (Thrice Amended) A blancher for heating a plurality of food products at the same time comprising:

a perforate food product-receiving chamber that has a food product inlet at one end, a food product outlet at its other end, a liquid heat transfer medium, and a plurality of food products received therein;

a tank in which the perforate food product-receiving chamber is disposed;

a food product transport mechanism disposed in the food product-receiving chamber for urging food products in the food product-receiving chamber from adjacent the food product inlet toward the food product outlet, the food product transport mechanism comprising an auger having a plurality of pairs of axially spaced auger flights;

a plurality of pairs of orifices disposed in fluid flow communication with the heat transfer medium each for discharging a fluid under pressure into the food product-receiving chamber toward the food products; and

fluid comprising a gas discharged from each of the orifices at a volumetric flow rate of at least 60 CFM for increasing heat transfer to the food products.

45. (Thrice Amended) A blancher for heating a plurality of food products at the same time comprising:

a perforate food product-receiving chamber having a food product inlet at one end, a food product outlet at its opposite end, a liquid heat transfer medium, and a plurality of food products received therein;

a tank in which the perforate food product-receiving chamber is disposed;

a food product transport mechanism that comprises an auger disposed in the perforate food product-receiving chamber for urging food products in the food product-receiving chamber from adjacent the food product inlet toward the food product outlet, the auger having a plurality of pairs of axially spaced auger flights; and

a plurality of pairs of orifices disposed in fluid flow communication with the liquid heat transfer medium each for discharging a fluid under pressure into the food product-receiving chamber toward the food products;

wherein the liquid heat transfer medium is discharged from each of the orifices at a pressure of at least 30 psi for increasing heat transfer to the food products.

46. (Thrice Amended) A blancher for heating a plurality of food products at the same time comprising:

a perforate food product-receiving chamber having a food product inlet at or adjacent one end, a food product outlet at or adjacent an opposite end, a liquid heat transfer medium, and a plurality of food products received therein;

a tank in which the perforate food product-receiving chamber is disposed;

a food product transport mechanism that comprises an auger disposed in the perforate food product-receiving chamber for urging food products in the food product-receiving chamber from adjacent the food product inlet toward the food product outlet, the auger having a plurality of pairs of axially spaced auger flights; and

a plurality of pairs of orifices disposed in fluid flow communication with a heat transfer medium each for discharging a fluid under pressure toward the food products;

wherein the fluid discharged from each of the orifices is a liquid at a pressure of at least 80 psi.

47. (Twice Amended) A blancher for heating a plurality of food products at the same time comprising:

a perforate and tubular food product-receiving chamber having a food product inlet, a food product outlet, and a plurality of food products received therein;

a tank that receives the perforate and tubular food product-receiving chamber;

a liquid heat transfer medium disposed in the tank and in the perforate and tubular food product-receiving chamber;

a food product transport mechanism that comprises an auger disposed in the perforate and tubular food product-receiving chamber for urging food products in the food product-receiving chamber from adjacent the food product inlet toward the food product outlet, the auger having a plurality of pairs of axially spaced auger flights; and

a plurality of pairs of orifices disposed in fluid flow communication with a heat transfer medium each for discharging a fluid under pressure toward the food products;

wherein the fluid discharged from each of the orifices is a gas at a pressure of at least 2 psi and at a flow rate of at least 100 CFM.